



2014-2015 ANNUAL REPORT OF THE WATER QUALITY ADVISORY GROUP TO THE COUNTY EXECUTIVE AND COUNTY COUNCIL

Established by the Water Quality Discharge Law, the Water Quality Advisory Group (WQAG) is required to report once a year to the County Executive and Council on its activities and findings. This report discusses the issues confronted by the WQAG during 2014 and summarizes its activities and recommendations during the past year, as well as planned areas of focus for 2015. The leadership of the group continued with two co-chairs: Beth Forbes and Paul Hlavinka. The WQAG also maintained its focus on three broad subject areas: (1) High-quality waters; (2) Permit implications; and (3) Emerging issues. WQAG solicited new members to fill several vacancies.

In addressing the issues of water quality in 2014, the WQAG relied on the expertise of its members, as well as consulting subject-matter experts, staff and department representatives to present information and options on the broad areas defined as 2014's priorities. This consultative process informed the WQAG's deliberations on its 2014 actions and recommendations. The WQAG meetings included presentations organized to regularly bring in outside speakers and technical experts to brief the WQAG on how the issues affect or are implemented in the County, and to share their perspectives.

Summary of 2014 Activities and Recommendations

1. Ten Mile Creek

In January 2014, the WQAG prepared and submitted a letter to the County Executive concerning the Ten Mile Creek limited amendment to the 1993 Clarksburg Master Plan.

2. MS4 Permit Requirements

The County's MS4 permit provides the regulatory authority for watershed protection activities including the establishment of Total Maximum Daily Loads for certain pollutants such as trash and coliform bacteria. The WQAG continues to monitor this effort, which, by 2015, will require additional stormwater management for 20 percent of County's untreated impervious surfaces.

3. Water Quality Monitoring

WQAG was updated regarding the various types of DEP's water quality monitoring conducted: County-wide stream monitoring, special protection area monitoring, restoration project monitoring, MS4 permit required monitoring, and trash in the Anacostia watershed. Monitoring includes a diverse set of goals, and efforts are focused

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on assessing and comparing conditions during discrete points in time. Monitoring helps with watershed planning by identifying pollutants, restoration effectiveness, and progress towards the County's water quality goals. Following a presentation by DEP, WQAG sent a letter to the County Executive expressing concern that Maryland Department of the Environment's (MDE's) water quality monitoring data is more limited than County data (*Comparability and Use Assessment of Montgomery County Department of Environmental Protection Stream Monitoring and Maryland Biological Stream Survey Data*). This letter describes WQAG's concern about inefficient use of taxpayer dollars in monitoring stream quality. Monitoring has also uncovered locations of illicit discharges. DEP noted that current storm drain mapping isn't accurate, which makes it difficult to find sources of illicit discharges. Presentation highlights also touched on water chemistry station cost share with USGS.

4. WSSC Sanitary Sewer Consent Decree/Fee-in-lieu of reforestation

The WSSC is under a consent decree to complete work to reduce sanitary sewer overloads and illicit discharges from sanitary sewers. WSSC is proceeding with impacts to stream valley/buffer particularly to trees. WSSC is taking efforts to minimize impacts and was working with DNR on an appropriate fee-in-lieu of reforesting these same areas. The initial fee of approximately \$14M was reduced to approximately \$3M after the organizations completed negotiations. An MOU has been established and the issue has been settled. WQAG was not involved in this negotiation, but determined it should be involved in the issue and impacts in the future. Finally, it was noted that the lack of stormwater controls continues to result in high runoff rates that expose infrastructure, which may be a topic for future discussion. The WQAG will continue to monitor this issue.

5. Water quality impairments: nutrient loading and deicing chemicals

WQAG is awaiting the *Accounting for Growth* draft regulations that are expected in 2015. Nutrient trading is a part of this effort and may be a way to address nutrient increases resulting from growth. Maryland uses state-of-the-art winter road treatment to limit deicing chemicals in the water supply. WQAG will continue to monitor this issue.

6. Microcystin

A type of cyanobacteria called microcystin (often referred to as blue-green algae or harmful algal blooms - HABs) that creates toxins are found in lakes and ponds in the County. Both the Montgomery County Department of Parks and the Maryland Department of the Environment recommend that people and their pets avoid drinking or swimming in HAB-contaminated water. This strain of algae can damage the liver and cause gastrointestinal discomfort when ingested and can be a minor skin irritant upon contact. The algae that produces microcystin is influenced by lake seasonality, light, temperature, and nutrients. Microcystin blooms generally are associated with warm, fresh, nutrient-enriched water. Blooms generally occur in mid to late summer and can continue into the fall. Lake Needwood is not the only lake in the county that has this toxin, but it is well known because it is a larger lake within MNCPPC's jurisdiction. Lake Needwood, Lake Frank, Pine Lake, and Wheaton Regional Park are all regularly tested by MNCPPC, and WSSC tests Seneca Lake. Any urban drainage deeper than three

meters is likely to have cyanobacteria that produce this toxin. WQAG will continue to review monitoring, mitigating and eliminating HABs, and make recommendations to the County Executive on these matters.

7. RainScapes

The RainScapes program, started in 2004, funds projects to reduce impervious landscapes and provides instruction in design and maintenance for landscaping professionals. There are rewards and rebates available to both residential and non-residential properties – expenditure of tax money on private property is unusual. The program provides technical assistance to MCPS. Rebates are available for conservation landscaping, tree canopy, permeable pavers and porous concrete and green roofs. WQAG continues to review current issues.

8. Artscapes

The WQAG considered recommendations for a storm drain art program and prepared recommendations through a letter to Bob Hoyt of DEP. The letter highlighted two points: how to develop art and how to pay for the program. DEP accepted the recommendations and oversaw drain art projects at the Aspen Hill and Kensington Libraries in 2014. DEP is planning a storm drain art contest for 2015. A letter prepared for the County Executive recommends maintaining current funding levels for the storm drain labeling stickers and program.

9. Fracking

The State of Maryland produced a Marcellus Shale Public Health Study, requesting comments prior to October 3, 2014. While there is no Marcellus shale in Montgomery County, the County is downstream from the Marcellus shale formation. At present, there doesn't seem to be a direct impact from fracking of Marcellus shale in other parts of the State. Triassic shales are present in the County, but they are less productive for commercial production. WQAG will continue to monitor this issue since the water quality impacts from fracking may affect the County.

Summary of 2013 Presentations/Technical Experts

Invited Speakers/Topics:

1. Jennifer Chavez, an EarthJustice lawyer, briefed the WQAG in April on the lawsuit against the Maryland Department of Environmental Protection (with Montgomery County later adding itself) regarding the county's MS4 permit. Acting on behalf of the Anacostia and Potomac Riverkeepers and the Potomac River Alliance, EarthJustice filed a 2009 challenge on the basis that the permit does not ensure that areas covered by the permit will meet water quality standards. In December 2013, the presiding judge ruled in favor of the suing parties, citing a disconnection between what the Clean Water Act requires and what the permit specifies. Since Montgomery County is the model that other

counties will likely have to follow, there needs to be a road map of specific quantifiable requirements by which to measure progress and see net decreases in pollutants each year. The judge ruled that MDE must work to improve the permit. There is now an appeal in process.

2. Michael Bollinger, a scientist at Anacostia Riverkeeper, joined Ms. Chavez in April and said that the collective goal is to change how MDE approaches permits—and that the litigation should not be seen as criticism of the counties. He also mentioned an environmental justice factor—that fair access to clean water is a goal.
3. Jai Cole, MNCPPC, spoke in June regarding toxin called microcystin found in cyanobacteria (often referred to as blue-green algae). The cyanobacteria are present in lakes and can lead the Montgomery County Department of Parks and the Maryland Department of the Environment to suggest that people not drink the water, avoid swimming in it and to keep pets away. This strain of algae can damage the liver and cause gastrointestinal discomfort when ingested and be a minor skin irritant upon contact. Lake Needwood is not the only lake in the county that has this toxin, it is well known because it is a larger lake and is within MNCPPC jurisdiction. Any urban drainage deeper than three meters is likely to have cyanobacteria that produce this toxin.
4. Ann English, DEP, spoke in July regarding the RainScapes program started in 2004 and funded by the County's Water Quality Protection Charge. The original goal was to control the first 1 inch of runoff from 50 existing impervious acres by 2015. Today the program is at 41.7% of its goal using 40% of the funds. An annual operating budget of about \$385,000 funds about 800 projects. The staff has recently grown from 2.5 to more than 4.5 employees. A number of initiatives make up the program. Basic information to the public is available. Instruction in design and maintenance for landscaping professionals is also a part of the program. There are rewards and rebates available to both residential and non-residential properties – expenditure of tax money on private property is unusual. The program provides technical assistance to MCPS. Finally, there is the original Neighborhood program encompassing about a dozen areas within the County.
5. Mark Brackett of WSSC presented information in October on WSSC's proposed 2015-2016 budget. He also discussed the five-year **WSSC FY 2016 – 2021 CIP Highlights**. The overall proposed budget is \$4.2 Billion. The projected system improvements have been broken down into capital-sized mains (water lines 16 inches in diameter and greater and sewer lines 15 inches in diameter and greater) and smaller pipes. Most of the budget is for system upgrades. Most of the funding comes from bonds. The primary focus is on larger lines. The small diameter water lines and sewer lines consent decree improvements are on schedule to be completed in 2015, but is now scheduled for 2018. Going forward there will be a push to rehabilitate laterals which may result in the greatest reduction in infiltration and inflow. Access to the improvement sites, necessary

permits and required restoration makes up a large portion, as much as \$1M, of the improvement cost. Costs are unprecedented and have delayed actual work. All assessment is complete on consent decree improvements and contracts have all been awarded. Water Pipe Testing: Acoustic monitoring is occurring on all pipes 48" and larger. Monitoring has begun on 36" and 42" pipes. Smaller pipes must be accessed via robots or tested with *SmartBalls* (acoustic sensors that pass through the pipe and calculates flow rates). New access points must be constructed to get monitoring equipment into smaller pipes. WSSC will be looking at inspecting 400 large pipes and repairing approximately 50 miles of water line per year for the foreseeable future. Mr. Brackett covered water use rates and funding. WSSC proposes to address its budget shortfall by increasing the account maintenance fee from \$11 to \$13.50 per quarter. WSSC is looking at what else it can propose to meet budget shortfalls. Affordability does not go into rates. There are other programs to address disadvantaged customers. A wind farm, solar panels and energy generation from digester waste gas reuse cuts long-term costs.

Areas of Focus for the Coming Year

The WQAG will continue to invite speakers and presenters to provide information on topics and issues that can potentially affect water quality. Topics of interest include, but are not limited to:

- Water quality monitoring – State and County protocols
- Carbon sequestration
- Impact of climate change on water resources
- New Smart Growth stormwater laws allowing nutrient trading
- MDE Industrial Stormwater Permit and related litigation
- WSSC Consent Decree project work
- MDE appeal - MS4 permit insufficiently specific
- Fracking
- Special Protection Areas
- DEP Budget FY 2016
- Nutrient loading
- Trash bag data as a result of the bag tax

- County Stormwater Management Permit
- WSSC's Microcystin and HABs working group
- Soil conservation and agriculture runoff
- Pesticide legislation
- Ten Mile Creek watershed
- Triclosan
- TMDLs
- Eco-District approach to the Bethesda Sector Plan